

# Consumer Microcircuits Limited

## FX707 Code Selector & Automatic Repeat Encoder

**Obsolete Product  
- For Information Only -**

Publication D/707/2 March 1984

**Automatic Repeat Tone Encoder**

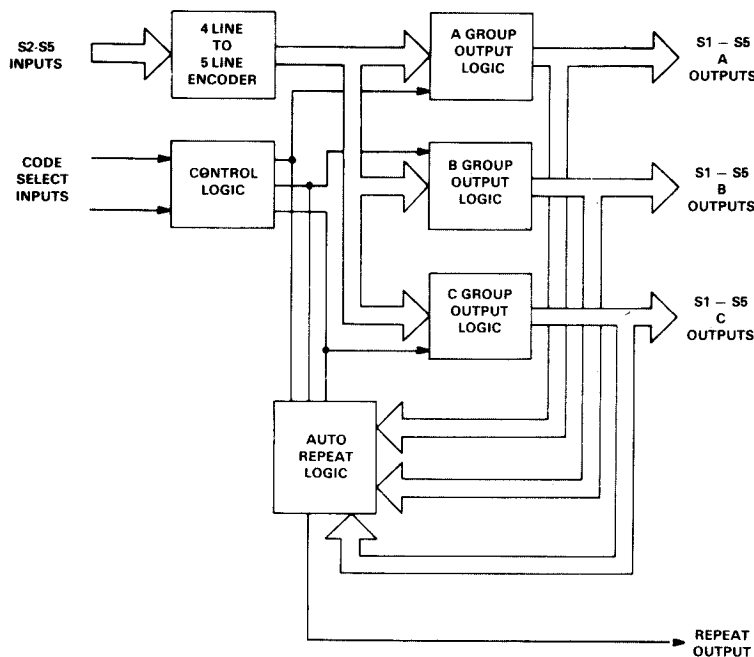
**Multicode Selector**

**5-Tone Selective Call for Mobile Operation**

**On-Chip Strobe for Noise Rejection**

**Only One External Component Required**

**Interfaces with Thumbwheel Switches**



# FX707

Fig. 1 FX707 Internal Block Diagram

The FX707 is a PMOS monolithic 3-way 5-pole logic switch intended for use with the CML FX407/507/607 5-tone sequential code transceivers. It allows any one of three programmed codes to be selected by applying logic levels to two control pins. The required codes are programmed by linking each of the three sets of five output pins to appropriate digits at the FX407/507/607 tone select inputs, using wire links, thumbwheel switches or other selector means.

In addition to the code select switching, the FX707 contains circuits which recognize codes containing identical consecutive digits and automatically select the repeat tone frequency (R) at correct points in the code sequence. This exclusive feature permits direct decimal 'as written' programming of code numbers and eliminates errors and difficulties which identical digits cause in manually and automatically variable

encoding systems. An on-chip strobe generator rejects noise inputs caused by wiring interaction when coding switches are located at a distance from the decoder.

Combining the FX707 with an FX407/507/607 transceiver provides a complete 5-tone selective call system capable of vehicle to vehicle, talk through, status transponding and other advanced operating modes with major savings in cost, size and engineering complexity compared with alternative conventional methods.

Only one external component is necessary for correct operation of the FX707.  $C_R$  (to ground) must be connected to the R output. The value of  $C_R$  must exceed  $250 \times$  the maximum possible capacitive loading that might occur on any other output pin. In most systems a value of  $C_R = 0.47\mu F$  will be sufficient.

## Maximum Ratings

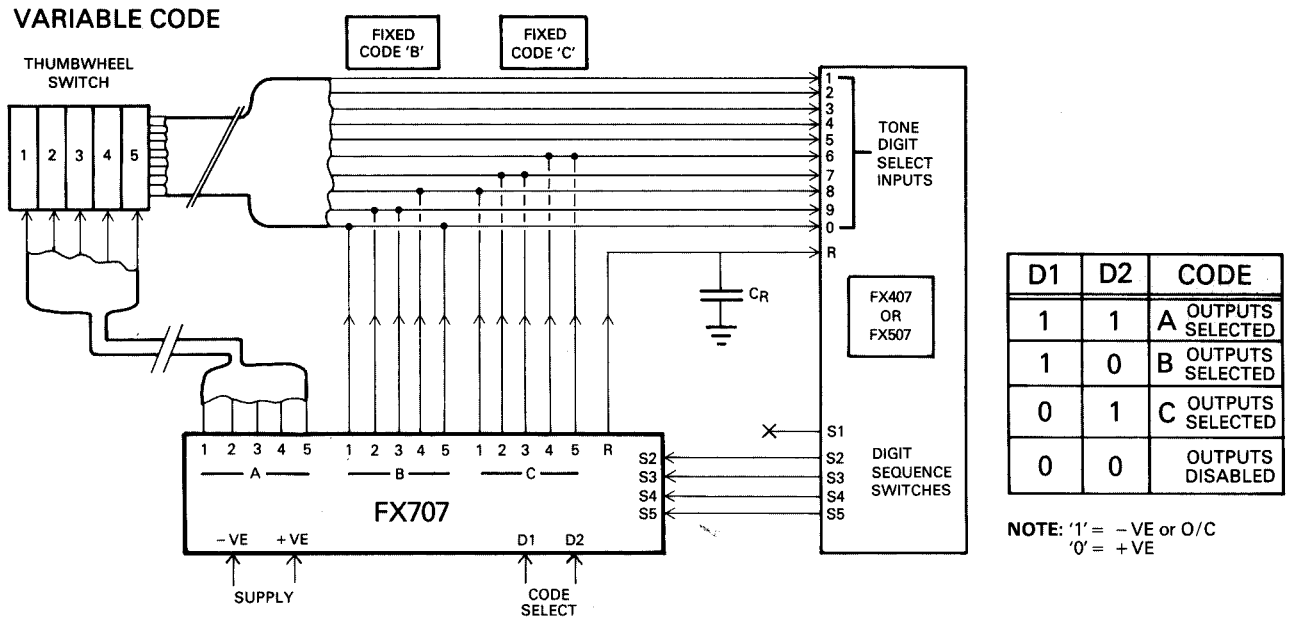
Max. voltage between any pin and +VE supply pin  
 Max. output switch load current  
 Max. device dissipation at 25°C ambient temperature  
 Operating temperature range  
 Storage temperature range

-20V & +0.3V  
 -10mA  
 400mW  
 -30°C to +85°C  
 -55°C to +125°C

## Characteristics

Symbol	Parameter	Notes	Min.	Typ.	Max.	Unit
Vs	Supply voltage	Operating range	10	12	15	V
Is	Supply current			6		mA

Fig. 2 External Connections



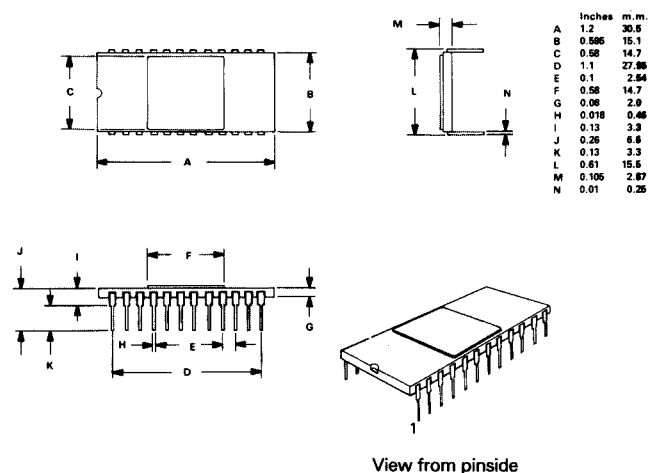
NOTE: All inputs have pullups approx. 300kΩ to -VE supply.

Fig. 3 Pin Data

24-Pin D.I.L. Ceramic

Pin No.	Function	Pin No.	Function
1	5A	13	-VE Supply
2	4A	14	S5
3	3A	15	S4
4	2A	16	S3
5	1A	17	S2
6	1C	18	+VE Supply
7	2C	19	R
8	3C	20	5B
9	4C	21	4B
10	5C	22	3B
11	Control D1	23	2B
12	Control D2	24	1B

Fig. 4 Package Outline



## Handling Precautions

The FX707 is a PMOS integrated circuit which includes input protection. However, precautions should be taken to prevent static discharges which can cause damage.

CML does not assume any responsibility for the use of any circuitry described. No circuit patent licences are implied and CML reserves the right at any time without notice to change said circuitry.



**CONSUMER MICROCIRCUITS LIMITED**  
 WHEATON ROAD · INDUSTRIAL ESTATE EAST  
 WITHAM · ESSEX CM8 3TD · ENGLAND

Telephone: 0376 5131

Telex: 99382 CMICRO G